

IN THE CLAIMS:

Please amend Claims 1, 14, 17, 26, 42, 84 and 88, as follows.

Sub 1. (Currently Amended) An image pickup apparatus having a camera body and a lens unit, comprising:

a ring member for driving the lens unit;

detection means for detecting a change amount of a rotation of said ring member;

control means, arranged providing in the lens unit, for performing motion/stop control of at least the lens unit along an optical axis in accordance with a detection result by said detection means; and

motion direction setting means, arranged providing in the camera body, for a user to set a desired motion direction of the lens unit relative to the rotation direction of said ring member,

wherein said motion direction setting means arranged in said camera body comprises (i) character display means, (ii) menu setting means, (iii) display means for provided in said camera body and displaying an image picked up by said image pickup apparatus, (iv) a menu function control unit for controlling said character display means in accordance with the operation state of said menu setting means operated by the user, and for displaying a predetermined menu on a display screen of the display means, and (v) setting means for selecting a desired setting item among a plurality of items of the predetermined menu displayed on said display means by said menu function control unit means and setting a condition regarding the motion direction of the lens unit.

2. (Previously Amended) An image pickup apparatus according to claim 1, wherein the lens unit includes a magnification lens, and said motion direction setting means comprises:

an operation switch capable of being operated by a user; and

change means for changing the motion direction of the lens unit relative to the rotation direction of said ring member in accordance with the operation state of said operation switch.

3. (Previously Amended) An image pickup apparatus according to claim 2, wherein the lens unit is made removable relative to the camera body of the image pickup apparatus.

4. (Previously Amended) An image pickup apparatus according to claim 3, wherein said ring member is disposed concentrically about an optical axis of the lens unit.

5. (Previously Amended) An image pickup apparatus according to claim 1, wherein the lens unit includes a magnification lens, and said motion direction setting means comprises:

memory means for storing motion direction information of the lens unit relative to the rotation of said ring member, the motion direction being given by a user; and

change means for changing the motion direction of the lens unit in accordance with the motion direction information stored in said memory means.

6. (Previously Amended) An image pickup apparatus according to claim 5, wherein the lens unit is made removable relative to the camera body of the image pickup apparatus.

7. (Previously Amended) An image pickup apparatus according to claim 6, wherein said ring member is disposed concentrically about an optical axis of the lens unit.

Claim 8 (Cancelled).

9. (Previously Amended) An image pickup apparatus according to claim 1, wherein the lens unit is made removable relative to the camera body of the image pickup apparatus.

10. (Previously Amended) An image pickup apparatus according to claim 9, wherein said ring member is disposed concentrically about an optical axis of the lens unit.

Claims 11 and 12 (Cancelled).

13. (Previously Amended) An image pickup apparatus according to claim 1, wherein said ring member is disposed concentrically about an optical axis of the lens unit.

14. (Currently Amended) An image pickup apparatus having a camera part and a lens part detachably mounted on the camera part, with a magnification lens and a ring member that drives the lens part, comprising:

communication means for performing communication between said camera part and said lens part;

detection means which detects a change amount of a rotation of the ring member for driving the lens part;

camera control means, provided in the camera part, for selecting and determining a response characteristic between an output of said detection means and a motion of the magnification lens, and for transmitting the selected response characteristic to said lens part;

lens control means, provided in said lens part, for receiving information concerning the selected response characteristic transmitted from said camera control means through said communication means, and for controlling the motion of said magnification lens in response to the operation of said ring member in accordance with the selected response characteristic; and

storing means, provided in said camera part, for storing information of the response characteristic so that said camera part can hold the selected response characteristic throughout attaching/removing of said lens part ~~the selected response characteristic is not volatile even in the case of attaching/removing of said lens part.~~

15. (Previously Amended) An image pickup apparatus according to claim 14, wherein the plurality of characteristics of said camera control means includes a

first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to be constant and a second characteristic for controlling a motion speed of the magnification lens to be variable in accordance with a rotation speed of the ring member.

16. (Previously Amended) An image pickup apparatus according to claim 14, wherein the plurality of characteristics of said camera control means includes a first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to become a first predetermined amount and a second characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a second predetermined amount different from the first predetermined amount.

17. (Currently Amended) An image pickup apparatus having a camera part on which a lens part is detachably mountable, the lens part having a ring member that drives the lens part, comprising:

communication means for performing communication between said camera part and the lens part;

detection means which detects a change amount of a rotation of the ring member for driving the lens part;

camera control means, provided in the camera part, for selecting and determining a response characteristic between an output of said detection means and a motion of the magnification lens, and for transmitting the selected response characteristic

to the lens part through said communication means so as to set the selected response characteristic to control means which controls the motion of the magnification lens in response to the operation of the ring member; and

storing means, provided in said camera part, for storing information of the response characteristic so that said camera part can hold the selected response characteristic throughout attaching/removing of said lens part ~~the selected response characteristic is not volatile even in the case of attaching/removing of the lens part.~~

18. (Previously Amended) An image pickup apparatus according to claim 17, wherein the plurality of characteristics of said camera control means includes a first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to be constant and a second characteristic for controlling a motion speed of the magnification lens to be variable in accordance with a rotation speed of the ring member.

19. (Previously Amended) An image pickup apparatus according to claim 18, wherein the characteristic of said camera control means is changed in accordance with the state of an operation switch capable of being operated upon by a user.

20. (Previously Amended) An image pickup apparatus according to claim 18, wherein the characteristic of said camera control means is changed in accordance with information of the characteristic of said camera control means set by a user.

21. (Previously Amended) An image pickup apparatus according to claim 18, wherein the characteristic of said camera control means is changed in accordance with a photographing state.

22. (Previously Amended) An image pickup apparatus according to claim 17, wherein the plurality of characteristics of said camera control means includes a first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to become a first predetermined amount and a second characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a second predetermined amount different from the first predetermined amount.

23. (Previously Amended) An image pickup apparatus according to claim 22, wherein the characteristic of said camera control means is changed in accordance with the state of an operation switch capable of being operated upon by a user.

24. (Previously Amended) An image pickup apparatus according to claim 22, wherein the characteristic of said camera control means is changed in accordance with information of the characteristic of said camera control means set by a user.

25. (Previously Amended) An image pickup apparatus according to claim 22, wherein the characteristic of said camera control means is changed in accordance with a photographing state.

26. (Currently Amended) An image pickup apparatus having an image pickup apparatus main body and a lens part, detachably mounted on said main body, which has a magnification lens and a ring member disposed concentrically about a lens optical axis, comprising:

communication means for performing communication between said main body and said lens part;

detection means for detecting a change amount of a rotation of the ring member for driving said lens part;

camera control means, provided in the main body, for selecting and determining a response characteristic between an output of said detection means and a motion of the magnification lens, and for transmitting the selected response characteristic to said lens part;

lens control means, provided in said lens part, for receiving information concerning the selected response characteristic transmitted from said camera control means through said communication means, and for controlling the motion of said magnification lens in response to the operation of said ring member in accordance with the selected response characteristic; and

storing means, provided in said main body, for storing information of the response characteristic transmitted from said lens control means by said communication means so that said main body can hold the selected response characteristic throughout attaching/removing of said lens part ~~the selected response characteristic is not volatile even in the case of attaching/removing of said lens part.~~

27. (Previously Amended) An image pickup apparatus according to claim 26, wherein the plurality of characteristics of said camera control means includes a first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to be constant and a second characteristic for controlling a motion speed of the magnification lens to be variable in accordance with a rotation speed of the ring member.

28. (Previously Amended) An image pickup apparatus according to claim 26, wherein the plurality of characteristics of said camera control means includes a first characteristic for controlling a motion amount of the magnification lens per unit rotation of at least the ring member to become a first predetermined amount and a second characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a second predetermined amount different from the first predetermined amount.

Claims 29 and 30 (Cancelled).

31. (Previously Amended) An image pickup apparatus according to claim 27, further comprising:

an operation switch capable of being operated upon by a user; and
change means for changing the characteristic of said camera control means in accordance with a state of said operation switch.

32. (Previously Amended) An image pickup apparatus according to claim 31, wherein said change means changes the characteristic of said camera control means in accordance with information of the characteristic of said camera control means set by a user.

33. (Previously Amended) An image pickup apparatus according to claim 32, wherein said change means changes the characteristic of said camera control means in accordance with a photographing state.

34. (Cancelled)

35. (Previously Amended) An image pickup apparatus according to claim 28, further comprising:
an operation switch capable of being operated upon by a user; and
change means for changing the characteristic of said camera control means in accordance with a state of said operation switch.

36. (Previously Amended) An image pickup apparatus according to claim 35, wherein said change means changes the characteristic of said camera control means in accordance with information of the characteristic of said control means set by a user.

37. (Previously Amended) An image pickup apparatus according to claim 36, wherein said change means changes the characteristic of said camera control means in accordance with a photographing state.

Claims 38 and 39 (Cancelled).

40. (Previously Amended) An image pickup apparatus according to claim 14, wherein the ring member is disposed concentrically about the lens part.

41. (Previously Amended) An image pickup apparatus according to claim 17, wherein the ring member is disposed concentrically about the lens part.

42. (Currently Amended) An image pickup apparatus comprising:
a ring member disposed concentrically about a lens optical axis of a lens unit;

detection means for detecting a change amount of rotation of said ring member;

control means for performing motion/stop control of at least a magnification lens group along the optical axis in accordance with a detection result by said detection means; and

inhibition means for inhibiting said control means from performing the stop control during a predetermined period when said detection means detects a stop of rotation

of the ring member, and for causing said control means to continue movement of said magnification lens group when said detection means detects rotation of said ring member.

43. (Original) An image pickup apparatus according to claim 42, wherein the lens unit is removably and exchangeably mounted on a main body of the image pickup apparatus.

44. (Currently Amended) An image pickup apparatus comprising:
a ring member disposed concentrically about a lens optical axis of a lens unit;
detection means for detecting a change amount of rotation of said ring member;
control means for determining motion direction and speed of a magnification lens group in accordance with an output of said detection means and performing motion/stop control of the magnification lens group along the optical axis; and
change means for changing a sensitivity of motion/stop control of said control means relative to a detection result of said detection means so that said control means does not effect the motion control until an amount of rotation of said ring member, corresponding to the changed sensitivity, is detected by said detection means as to start the motion of the magnification lens in accordance with a different detection result of said detection means.

45. (Original) An image pickup apparatus according to claim 44, wherein said lens group is removably and exchangeably mounted on a main body of the image pickup apparatus.

Claim 46 (Cancelled).

47. (Original) An image pickup apparatus according to claim 44, wherein said change means changes the motion speed of the magnification lens group relative to an output of said detection means.

48. (Currently Amended) An image pickup apparatus having a magnification lens group, comprising:
a ring member disposed concentrically about a lens optical axis;
detection means for detecting a change amount of a rotation of said ring member;

lens control means for determining motion direction and a speed of the magnification lens group in accordance with an output from said detection means, and for performing motion/stop control of the magnification lens group along the optical axis; and

control means for controlling said lens control means so as to automatically change a sensitivity of the motion of the magnification lens group relative to a detection result of said detection means in accordance with a photographing state.

49. (Original) An image pickup apparatus according to claim 48,
wherein said lens group is removably and exchangeably mounted on a main body of the
image pickup apparatus.

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50. (Previously Amended) An image pickup apparatus according to
claim 48, wherein said control means changes the motion speed of the magnification lens
group relative to an output of said detection means.
